

Having now described the preferred embodiment, the invention is claimed to be:

1. A coin bank comprising:
a coin hopper;
a coin slide positioned below said coin hopper;
and,

5 a coin separating and sorting assembly located between said coin hopper and said coin slide, said coin separating and sorting assembly comprising:

a separating wheel including at least one coin receiving aperture and a toroidal flange extending
10 away from a face of said separating wheel, and

a wheel housing on which said separating wheel is supported, said wheel housing including a toroidal channel in which said toroidal flange of said separating wheel is accommodated.

2. The bank of claim 1 wherein said separating wheel toroidal flange comprises a set of gear teeth.

3. The bank of claim 2 further comprising a motor having an output shaft operably connected to said gear teeth of said toroidal flange for driving the separating wheel.

4. The bank of claim 3 further comprising a gear train positioned between said output shaft and said gear teeth of said toroidal shaft, one gear of said gear train being fastened on said output shaft and another gear of
5 said gear train engaging said gear teeth of said toroidal flange.

5. The bank of claim 2 wherein said wheel housing toroidal channel includes an opening through which said gear teeth of said toroidal flange can be accessed.

6. A coin bank comprising:
a coin hopper;
a sorter coin container positioned below said
coin hopper; and,

5 a coin separating and sorting assembly located
between said coin hopper and said sorted coin container,
said coin separating and sorting assembly comprising:

a separating wheel including at least one
coin receiving aperture,

10 a wheel housing on which said separating
wheel is supported, said wheel housing comprising:

a plurality of sorting apertures of
different sizes, each aperture being sized to allow
passage of a coin of a defined maximum diameter
therethrough.

15 7. The bank of claim 6 wherein said wheel housing
apertures are arranged in a size order.

8. The bank of claim 6 wherein at least one of
said sorting apertures has a trailing edge with an angled
surface.

9. The bank of claim 6 wherein said wheel housing
further comprises a central portion located radially
inwardly from said plurality of sorting apertures, said
central portion having a recessed area in an upper
5 surface thereof.

10. A coin bank comprising:
a coin hopper;
a sorted coin container positioned below said
coin hopper; and,

5 a coin separating and sorting assembly located
between said coin hopper and said coin slide, said coin
separating and sorting assembly comprising:

a separating wheel including at least one

10 coin receiving aperture wherein said at least one coin
receiving aperture in said separating wheel includes a
curved leading edge having a radius of curvature only
slightly larger than a diameter of a largest size coin
meant to be sorted, and

15 a wheel housing on which said separating
wheel is supported, said wheel housing including a
plurality of sorting apertures of different sizes, each
aperture being sized to allow passage of a coin of a
defined maximum diameter therethrough.

11. The bank of claim 10 wherein said leading edge
of each of said plurality of apertures of said separating
wheel has a thickness slightly greater than a thickness
of a thickest coin meant to be sorted.

12. The bank of claim 10 wherein each of said
plurality of apertures in said separating wheel has a
diameter which is smaller than a combined diameter of two
of a smallest diameter ones of the coins meant to be
5 sorted so that two of the smallest diameter ones of the
coins meant to be sorted cannot fit into one aperture.

13. The bank of claim 10 wherein said at least one
aperture in said separating wheel has a trailing edge
with a tapered surface that is smaller in thickness than
is a thickness of a thinnest one of the coins meant to be
5 sorted in order to prevent two of the coins from becoming
stacked in a single aperture.

14. A coin separating and sorting assembly
comprising:

a separating wheel including at least one coin
receiving aperture;

5 a wheel housing on which said separating wheel
is supported, said wheel housing comprising at least one
sorting aperture which is sized to allow passage of a

coin of a defined maximum diameter therethrough;

10 a coin support surface provided on one of the
separating wheel and the wheel housing; and,

a coin rolling surface defined on one of the
separating wheel and the wheel housing.

15. The assembly of claim 14 wherein said
separating wheel comprises a set of gear teeth and
further comprising a motor having an output shaft
operably connected to said gear teeth of said separating
5 wheel for driving said separating wheel.

16. The assembly of claim 14 wherein said wheel
housing comprises a plurality of apertures, arranged in a
size order.

17. The assembly of claim 16 wherein at least one
of said apertures has a trailing edge with an angled
surface.

18. The assembly of claim 14 wherein said wheel
housing further comprises a central portion having a
recessed area in an upper surface thereof.

19. A coin separating and sorting assembly
comprising:

5 a separating wheel including at least one coin
receiving aperture, wherein said at least one of coin
receiving aperture in said separating wheel includes a
curved leading edge having a radius of curvature only
slightly larger than a diameter of a largest sized coin
meant to be sorted;

10 a wheel housing on which said separating wheel
is supported, said wheel housing comprising at least one
sorting aperture which is sized to allow passage of a
coin of a defined maximum diameter therethrough;

a coin support surface provided on one of the

separating wheel and the wheel housing; and,

15 a coin rolling surface defined on one of the
separating wheel and the wheel housing.

20. The assembly of claim 19 wherein said leading
edge of each of said plurality of apertures of said
separating wheel has a thickness slightly greater than a
thickness of a thickest coin meant to be sorted.

21. The assembly of claim 19 wherein each of said
plurality of apertures in said separating wheel has a
diameter which is smaller than a combined diameter of two
of a smallest diameter ones of the coins meant to be
5 sorted so that the two of the smallest diameter ones of
the coins meant to be sorted cannot fit into a single
aperture.

22. The assembly of claim 19 wherein each of said
plurality of apertures and said separating wheel has a
trailing edge with a tapered surface that is smaller in
thickness than is a thickness of a thinnest coin meant to
5 be sorted in order to prevent two of the coins from
becoming stacked in a single aperture.

23. A coin separating and sorting assembly
comprising:

 a separating wheel including at least one coin
receiving aperture;

5 a wheel housing on which said separating wheel
is supported, said wheel housing comprising at least one
sorting aperture;

 a coin support surface provided on one of the
separating wheel and the wheel housing; and,

10 a coin rolling surface defined on one of the
separating wheel and the wheel housing, wherein a
trailing edge of the separating wheel at least one
aperture is so shaped as to allow an associated coin held

15 in said at least one aperture to contact said coin
rolling surface before the associated coin reaches the at
least one sorting aperture.

24. The assembly of claim 23 wherein said trailing
edge has a tapered surface that is smaller in thickness
than is a thickness of a thinnest coin meant to be sorted
in order to prevent two of the coins from becoming
5 stacked in a single aperture.

25. The assembly of claim 24 wherein said wheel
housing comprises a plurality of apertures arranged in
order of increasing size.

26. The assembly of claim 25 wherein said plurality
of apertures are spaced from each other.

27. A coin separating and sorting assembly
comprising:

a separating wheel comprising:

5 at least one coin receiving aperture
located in a wall of said separating wheel,

a surface adapted to contact a driving
element to enable rotation of said separating wheel;

a wheel housing on which said separating wheel
is supported;

10 a coin support surface provided on one of the
separating wheel and the wheel housing for supporting a
portion of an associated coin being moved by said
separating wheel in relation to said wheel housing; and

15 a coin rolling surface defined on one of said
separating wheel and said wheel housing.

28. The assembly of claim 27 further comprising a
motor operatively connected to said separating wheel
surface to enable rotation of said separating wheel when
said motor is actuated.

29. The assembly of claim 27 wherein each of said plurality of coin receiving apertures in said separating wheel includes a curved leading edge having a radius of curvature only slightly greater than a diameter of a largest size coin meant to be sorted.

30. The assembly of claim 29 wherein each of said plurality of coin receiving apertures in said separating wheel includes a trailing edge having a larger radius of curvature than said leading edge.

31. A coin separating and sorting assembly comprising:

a separating wheel comprising at least one coin receiving aperture located in said separating wheel, said at least one coin receiving aperture comprising a leading edge and a trailing edge, wherein said leading edge has a radius of curvature which is greater than is a radius of curvature of said trailing edge;

a wheel housing on which said separating wheel is supported;

a coin support surface provided on one of the separating wheel and the wheel housing for supporting a portion of an associated coin being moved by said separating wheel in relation to said wheel housing; and

a coin rolling surface defined on one of said separating wheel and said wheel housing.

32. A coin separating and sorting assembly comprising:

a separating wheel comprising at least one coin receiving aperture located in said separating wheel, said at least one aperture having a leading edge and a trailing edge, wherein at said leading edge, said separating wheel has a thickness slightly greater than a thickness of a thickest associated coin meant to be

sorted and wherein said trailing edge has a tapered
10 surface that is smaller in thickness than is a thickness
of a thinnest one of the associated coins meant to be
sorted;

a wheel housing on which said separating wheel is
supported;

15 a coin support surface provided on one of the
separating wheel and the wheel housing for supporting a
portion of an associated coin being moved by said
separating wheel in relation to said wheel housing; and

a coin rolling surface defined on one of said
20 separating wheel and said wheel housing.

33. A coin separating and sorting assembly
comprising:

a separating wheel comprising at least one coin
receiving aperture located in a wall of said separating
5 wheel;

a wheel housing on which said separating wheel is
supported, said wheel housing comprising at least one
coin sorting aperture located therein, said wheel housing
further comprising a central portion located radially
10 inwardly of said at least one sorting aperture, said
central portion having a recessed area in an upper
surface thereof, wherein said recessed area is located
adjacent said at least one coin sorting aperture of said
wheel housing.